
**R&D Budgeting - It's Harder than Rocket
Science**

Or

**Long Range Budgeting in a Short
Term Town**

Or

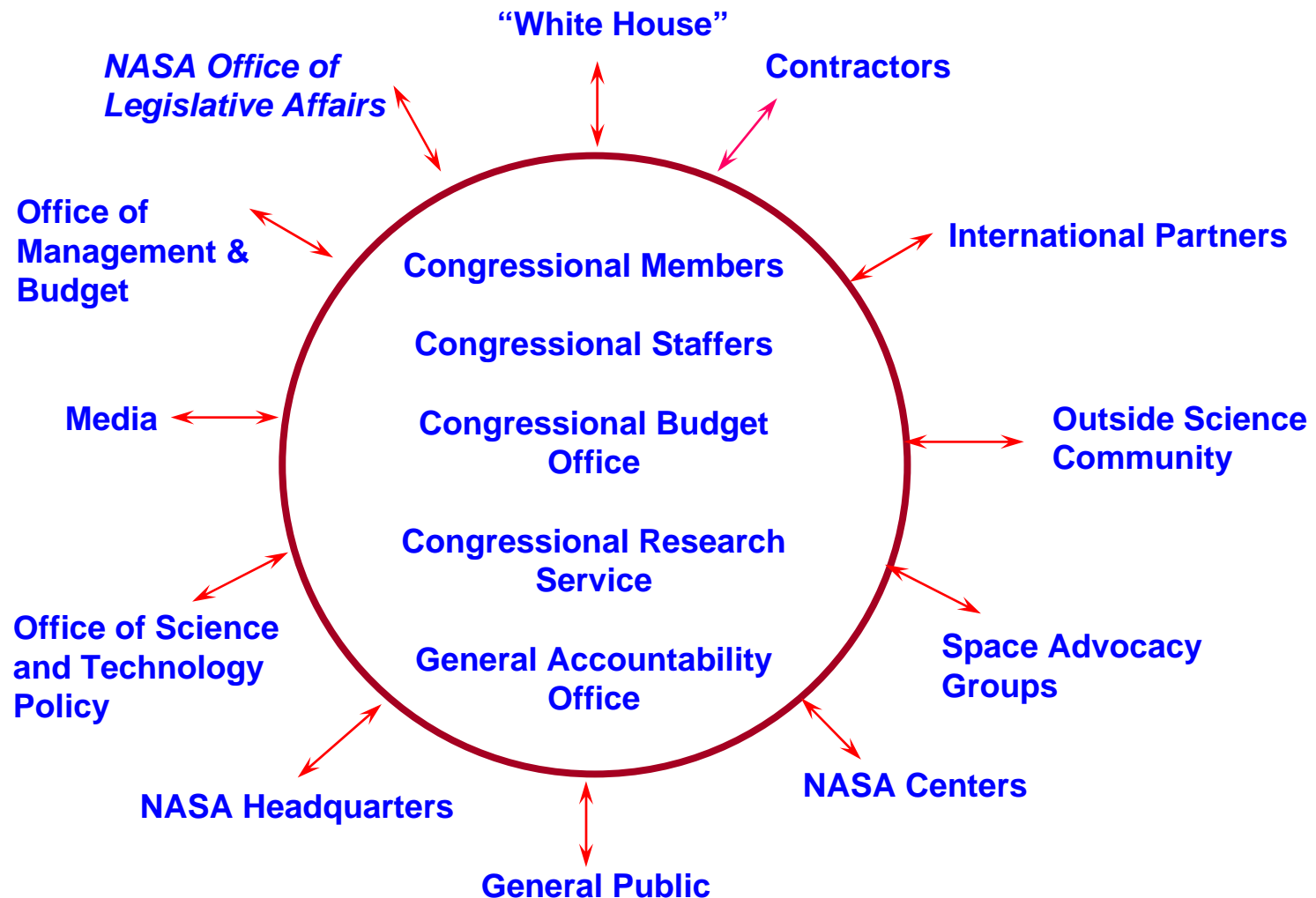
Budgeting: Democracy Trumps Efficiency

Our system is perfectly and purposely
designed to not be efficient

As a result, finding and holding on to a
credible budget is tougher than Rocket
Science

What's the Bottom Line?

Managing Expectations and Influencing the Arrow/Circle Touchpoints



What is the bottom line? Our system is perfectly designed to not be efficient. To protect Freedom and liberty is it's purpose. No one player holds the key to power.

The Facts Of Budget Life

- All major issues revolve around money. In the Federal government, the budget drives the debate
- Timing is everything. Stakeholders at all levels have different products and expectations relating to different phases of the budget cycle
- Change happens...constantly
- It's not "your" budget. How you see the budget depends on where you sit and what stage you are looking at...one person's requirement is seen by the next level as only the request...
- It is never complete

The Facts Of Budget Life

- One does not go and get capital. One builds credit so capital seeks you
- Budget process gets longer and more complicated every year. Federal government requires nearly two years to settle on a set of one-year estimates...and even then it is rarely approved by Congress before the year in question begins...usually takes months. Plan accordingly
- Your every move will be second guessed...by a myriad of people looking over your shoulder
- It is political! You never know when lightning will strike...facts can have little relevance if you are caught in the middle of a big political battle

A perspective on Efficiency vs Democracy

...I have always worked with public funds...from dictatorship to democracy, ... from war and defense departments to the civilian space agency. ...no top research manager today can ignore the economic, political, and even the social interface of huge national programs. He can't hold himself aloof from politics and say he doesn't care for it. It matters. And it matters most in a free country. In a democracy, the amount of politics is in direct proportion to the amount of the budget – and there's a lot of money in space. Democracy, with its system of checks and balances, is not the fastest reacting form of government... but...the public, once informed and aroused can be trusted to make the right decision. It is essential that the team members understand the system of government under which it works

– Excerpt from 1962 speech of Wernher Von Braun

Budget Advocacy – Depends Where You Sit

Task manager to Branch Chief
Project to Ctr Directorate
Project to Program (and Center)
Program to HQ Mission Directorate
Theme Manager to AA
HQ Mission Directorate to Administrator
NASA to OMB
Executive vs. Legislative
House vs. Senate
Authorizations vs. Appropriations
Republicans vs. Democrats
Member vs. Member
Coalition vs. Coalition



Where does your sense of where the us vs them mentality start?

An OMB Story....

By 2020, “Boots on the moon”...

We will have had

3-4 Presidents

8 elections for House of Representatives

3 Senate elections

15 budgets

So much for stability. However there are three things that will probably outlast us all...

The Moon...Our Curiosity...and...



...the Basis of Our Budget Authority

"We the people of the United States, in order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defense, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America."

It all starts with the Constitution but where does funding NASA fit in?

The Space Act refers to our role in support of the "general welfare"

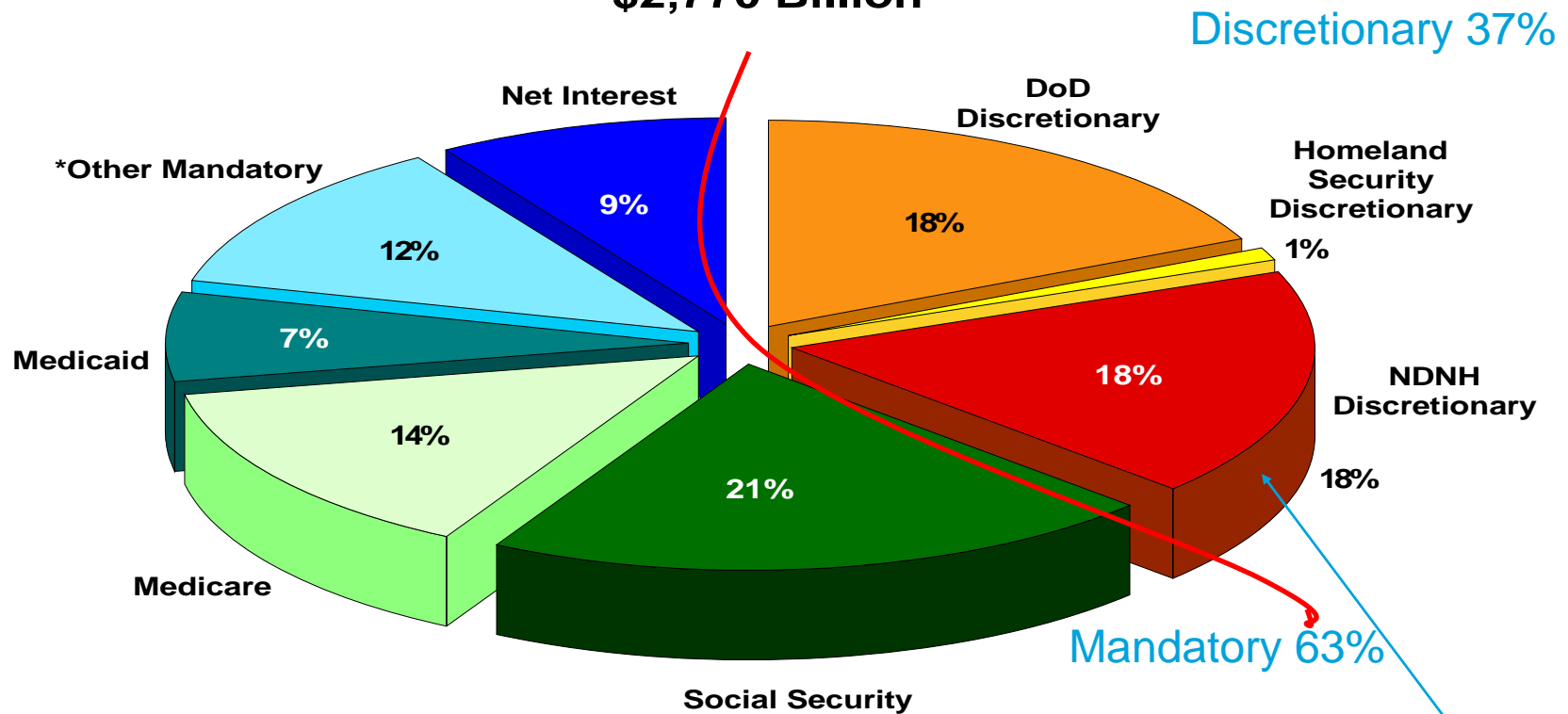
The President's Budget - Broad National Priorities

- Sets priority on war against terrorism
- Promotes strong economy; includes other high-priority domestic initiatives
- Restrains spending throughout the rest of government
- Maintains focus on results instead of dollars

Where's the Money?

2007 Outlays

\$2,770 Billion



* Includes -- Means Tested Income Support, Federal Employee Retirement, and other.

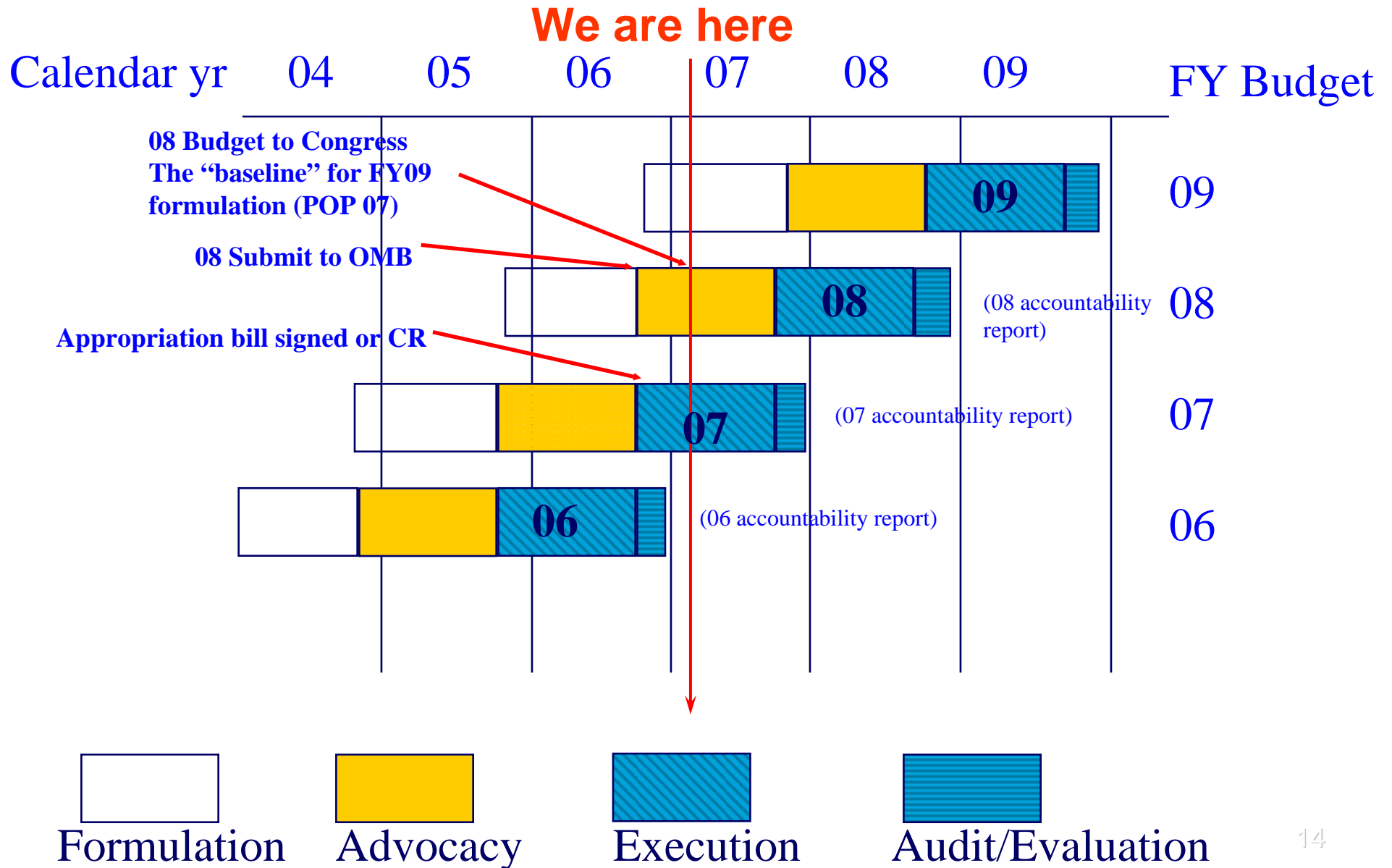
NASA is in here
.7% of discretionary spending

On What Basis are Decisions Made?

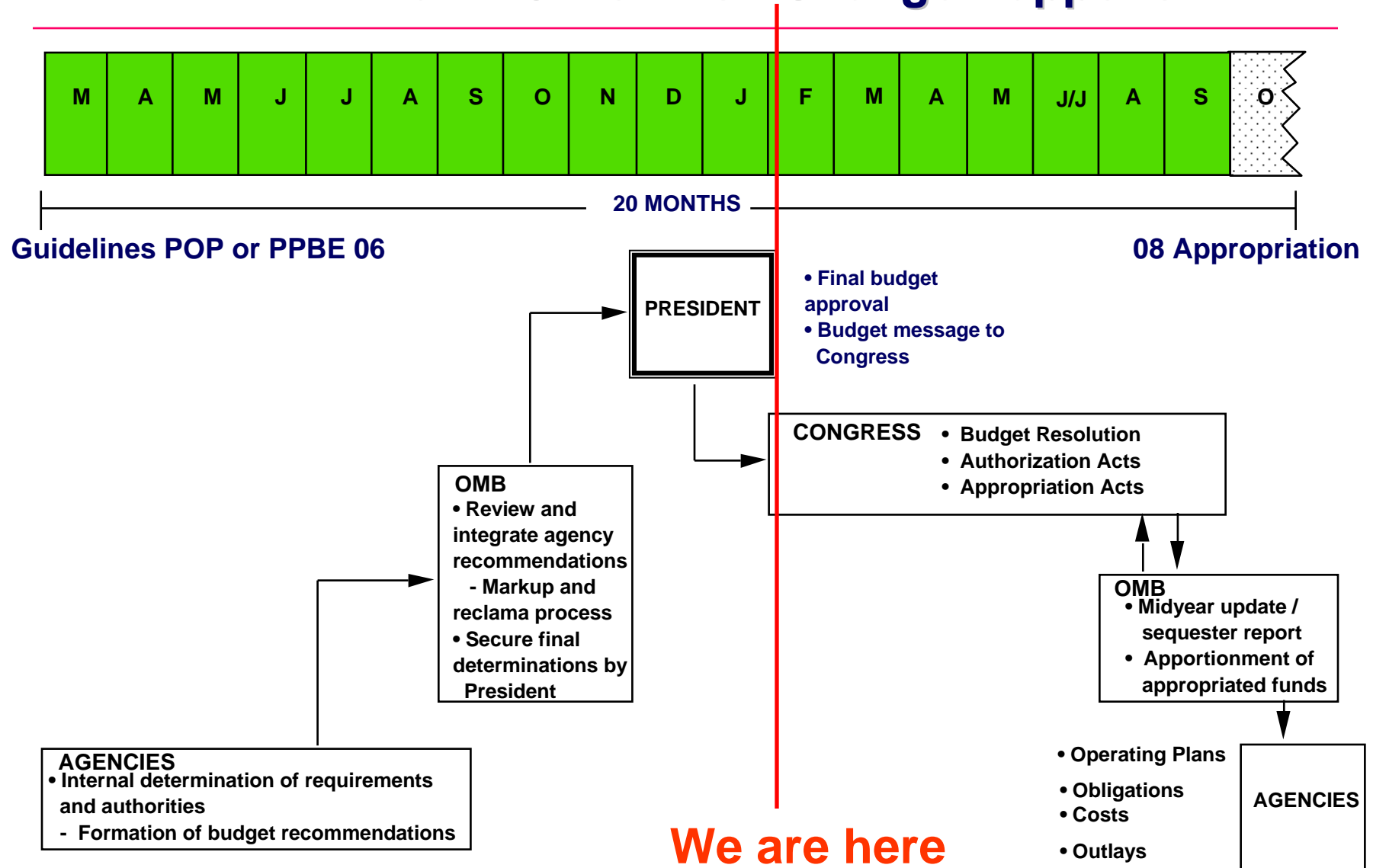
Budget Priority Factors

- **Strategic Relevance/Criticality**
 - Critical to achieve level 0 requirements as defined by Exploration vision
 - Critical to achieve level 0 as expanded to cover NASA goals
 - Directly critical to either of the above
 - Tangentially relevant to the above
 - Not relevant to the above
- **Agency Credibility (President's Vision, Strategic plan, External commitment)**
- **State of Development (Implementation, formulation, feasibility, early technology)**
- **Cost impact of delay (significant or limited cost impact)**
- **Process for Resolving issues (general order: project, program, theme, directorate, agency, overguide (hopeful thinking))**

Budget Stages – Where are we?



From Project submit to Appropriation takes at minimum 20 Months - Change Happens!



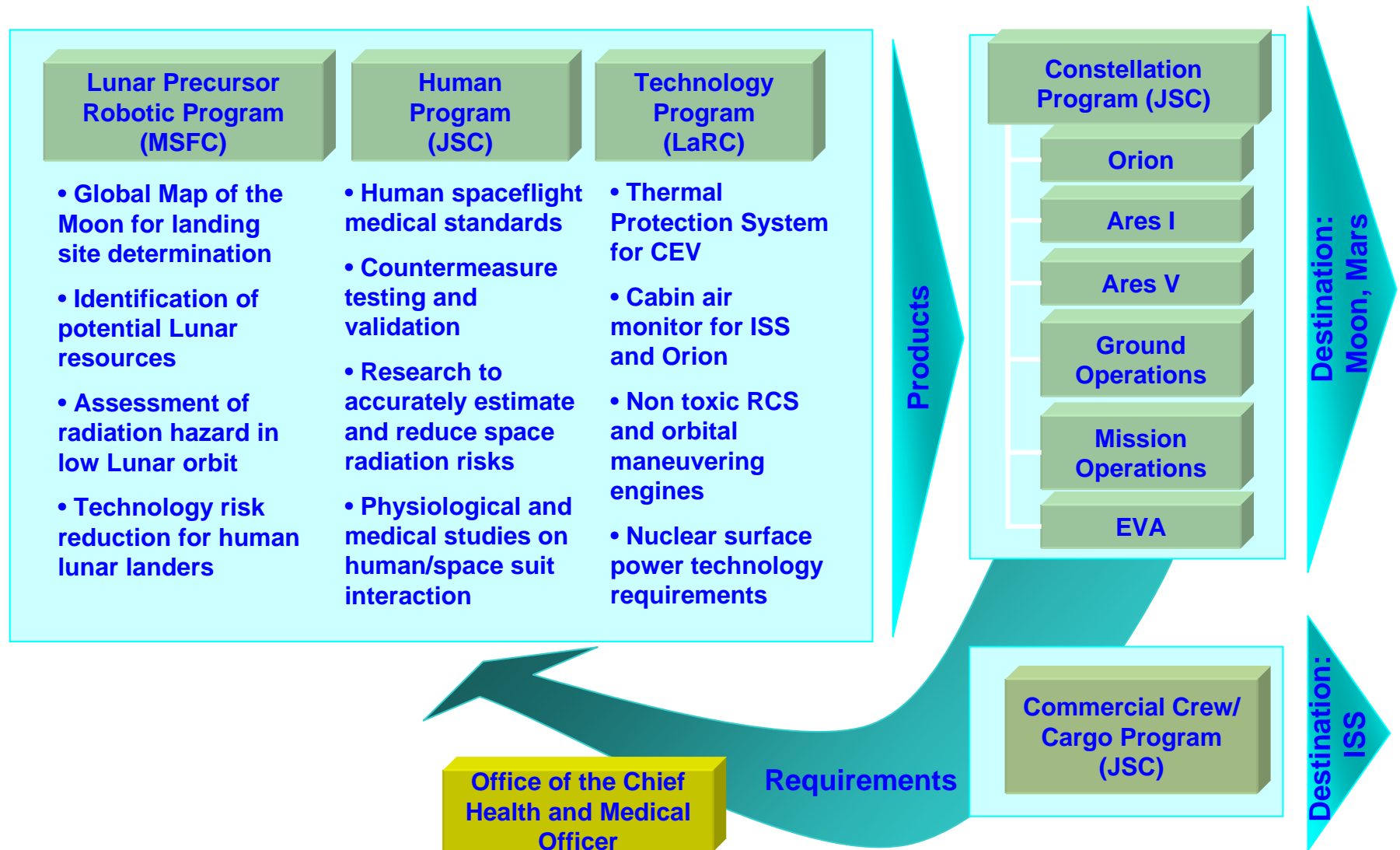
What's a Project Manager to Do?

- Requirements need to be credible, responsible, and focused on results with clearly defined milestones and a baseline against which progress can be measured.
- Credibility counts. A successful track record makes the job of convincing people of the need for resources much easier.
 - Tell reviewers about the project's accomplishments and the milestones it has met to date.
 - Show evidence of program control techniques and produce earned value reports that lend credibility to projections, accompanied by plans to resolve any problems.
 - Let the stakeholders understand relationship of resources to outcomes
- Be ready to trace the requirements from the project to the agency goals and objectives. This will enable the stakeholders to know why this project matters and how it contributes to the larger policy goals. It answers the “so what” factor and enables the reviewers up the line to translate an issue to their own bosses.
- Be responsive to any questions that come back; deadlines are looming and lack of responsiveness could lead to the wrong information going forward.
- Awareness of operating plan, commitments, obligation, and costing rates. Don't give anyone an excuse to take those funds away so careful and realistic planning is important.

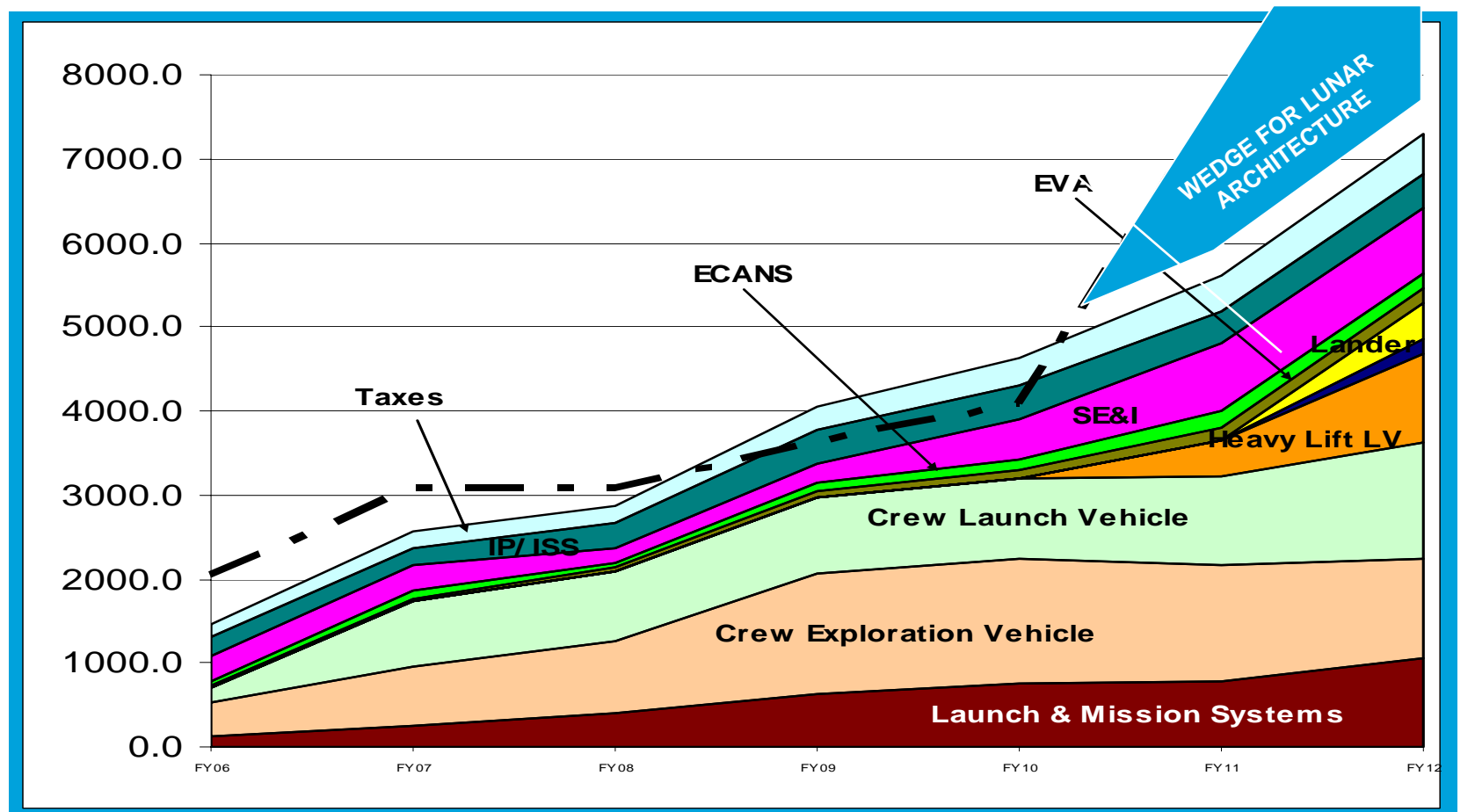
Budget Dynamics for Exploration

- Four months into the year and we are facing a full year CR.
- Implications for budget we just submitted to Congress
- Go as you can afford to pay – schedule is the variable
- Dynamics of preliminary estimates becoming the gospel early in formulation
- Protecting the roll through to compensate for flat funding curve

Program/Budget Framework: Enabling Exploration



Protecting the roll through is essential for success...but very hard in a town that has a short term focus - *Basis for FY07 Budget Submit*



	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>FY12</u>
FY05 Carry In	192						
Available Budget	1734	3058	3068	3613	4084	7698	8344
Requirement	1361	2564	2877	4047	4619	5614	7306
Total Available	565	494	191	434	535	2084	1038
Cum Delta	565	1059	1250	816	281	2365	3403

The thing about democracy, beloveds, is that it is
not neat, orderly, or quiet. It requires a certain
relish for confusion

- Molly Ivans, columnist